



AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 09/857,289

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REMARKS

Review and reconsideration on the merits are requested.

The prior art considered: English Abstract of Japan 11-706629 (JP '629); English Abstract of Japan: 9-267449 (JP '449).

Applicants first address the rejections under 35 U.S.C. § 112, second paragraph.

With respect to claims 16 and 17 lacking antecedent basis in "the release film", the dependency of these claims is changed to claim 15, thereby providing antecedent basis.

With respect to claims 19 and 20 being improper use claims, claims 19 and 20 are canceled and replaced by new claims 21 and 22.

It is believed Applicants have avoided all rejections under 35 U.S.C. § 112, second paragraph, and withdrawal of said rejections is requested.

Applicants now turn to the art rejections: claims 1-14 and 19 under 35 U.S.C. § 103(a) as being unpatentable over JP '629; claims 1-8 and 12-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '449.

The Examiner's reading of the prior art is set forth in the Action and will not be repeated here except as necessary to an understanding of Applicants traversal which is now presented.

The present invention

As set forth in claim 1, the surface protective film of the present invention (i) comprises a polyester film (A) and an adhesive layer (B) and (ii) has a critical bounce coefficient of not more than 0.5, wherein the above adhesive layer (B) satisfies the following requirements: (1) the dry adhesion to a stainless steel plate is 30 to 500 mN/25mm, (2) the rate change in the dry adhesion after being kept stuck at 60°C for a week is 0.5 to 2.0 times, (3) the size of a ball used in ball tack

measurement is 2/32 to 10/32 inches, (4) the thickness is 3 to 50 μm , and (5) the centerline average surface roughness (Ra) is 2 to 500 nm.

As set forth in claim 1, the rate change in the dry adhesion of the surface protective film of the present invention after being kept stuck at 60°C for a week is 0.5 to 2.0 times (requirement (2)). This means that the surface protective film of the present invention does not essentially change in its dry adhesion with the passage of time. A conventional film with an adhesive layer generally has a rate change in the dry adhesion after being kept stuck at 60°C for a week of more than 2 times and cannot meet the above requirement (2) of the present invention.

This rate change in dry adhesion is mainly caused by a time increase in adhesion area due to spread of adhesive over the surface of the adhesive layer. In the present invention, the rate change can be set to 0.5 to 2.0 times by adjusting the average surface roughness (Ra) of the adhesive layer (B) to 2 to 500 nm (above requirement (5)) and optimizing the ratio of the adhesive. A surface protective film which has this rate change does not have a high peel force even after it is kept stuck for a certain period of time, it does not float due to the inclusion of air bubbles when it is assembled with a substrate having a rough surface and it does not impair the inspectability or viewing of the substrate to be assembled therewith (see page 3, lines 20-27 of the specification). As for the control of the ratio, please refer to Examples.

In summary, the present invention is directed to providing a surface protective film which provides excellent inspectability (transparency) when it is assembled with a substrate by controlling its rate change in the dry adhesion thereof.

The Prior Art

JP '629 discloses a surface protective film which comprises an adhesive layer. However, JP '629 merely discloses an acrylic adhesive as one of the adhesive reagents for the adhesive layer and is silent regarding the composition of the acrylic adhesive (in the Japanese Publication of JP '629). JP '629 also fails to disclose an adhesive layer which satisfies all of the above requirements (1) to (5) of the present invention and an adhesive reagent which can attain such requirements.

JP '449 discloses an invention which is essentially identical to that of JP '629, and the above remarks regarding JP '629 apply with equal force to JP '449.

In summary, the cited references fail to suggest the technical concept of the present invention and the effects obtained in accordance with the present invention which is directed to providing a surface protective film of excellent inspectability (transparency) when the same is assembled with a substrate by controlling the rate change in dry adhesion of the surface protective film.

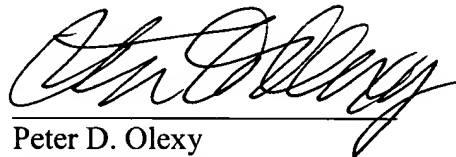
Applicants respectfully submit that the present invention is not suggested by either of the above references and request withdrawal.

Allowance is requested.

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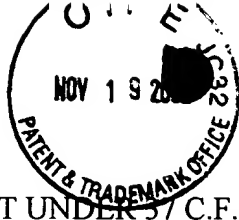
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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 2, 5, 19, and 20 are canceled.

The claims are amended as follows:

1. (Amended) A surface protective film for protecting the surface of a substrate, which comprises a polyester film (A) and an adhesive layer (B) formed on one of the surfaces of the polyester film (A) [and], which adhesive layer has a critical bounce coefficient of not more than 0.5, wherein the adhesive layer (B) satisfies all of the following conditions:

- (1) the dry adhesion against a stainless steel plate is 30 to 500 mN/25 mm;
- (2) the rate of change in the dry adhesion after being kept stuck at 60°C for a week is 0.5 to 2.0 times;
- (3) the size of a ball used in ball tack measurement is 2/32 to 10/32 inches;
- (4) the thickness of the adhesive layer (B) is 3 to 50 μ m;
- (5) the adhesive layer (B) has a center line average surface roughness (Ra) of 2 to 500 nm.

16. (Amended) The surface protective film of claim [14] 15, wherein the release film (D) has a center line average surface roughness (Ra) of 2 to 500 nm and has no particles of 25 μ m or larger and 10 or less particles of not smaller than 5 μ m and smaller than 25 μ m in an area with a

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length of 148 mm of the neighborhood which intersects perpendicularly with a length of 210 mm of one side (310.8 cm²).

17. (Amended) The surface protective film of claim [14] 15, wherein a release layer comprising at least one release agent selected from the group consisting of a silicone resin, a fluorine resin and an aliphatic wax, formed on the surface where the release film (D) has been contact with the adhesion layer (B).

Claims 21 and 22 are added as new claims.